



South African Agricultural Production & Investment Patterns

**Frikkie Liebenberg
ARC, South Africa**

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Outline

RSA Agriculture, 1911-2008

- **Output mix & Production trends**
- **Input mix & Trends**

Public Spending on Agriculture

- **Regulatory & Support**
- **Investment in R&D**
 - **Research Intensities**
 - **Scientist Trends**

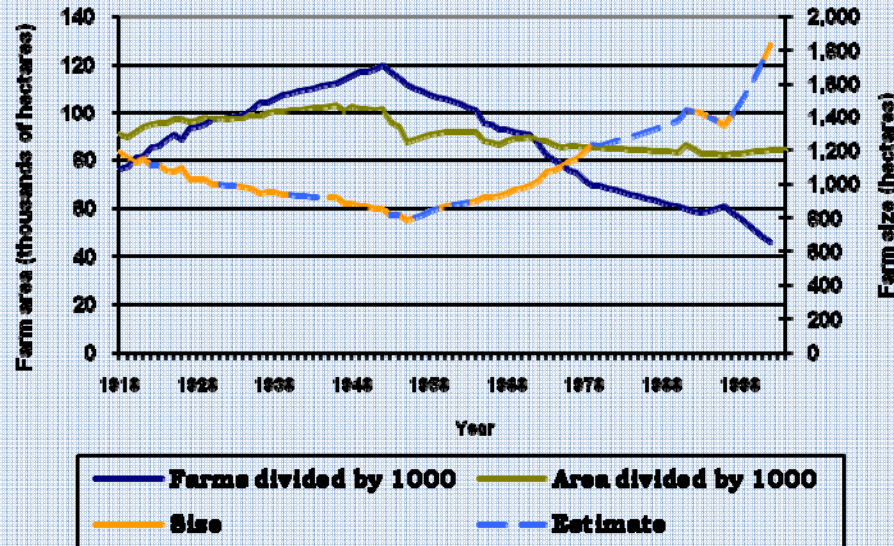
Productivity Trends

- **Land-labor**
- **MFP**

Concluding Comments

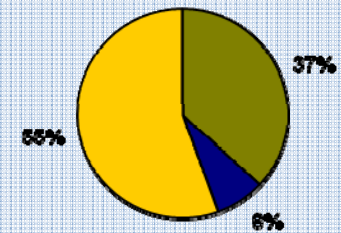
South African Agriculture, 1910-2007

Panel a: Number, Total Area and Average Size of Farms, 1918-2003

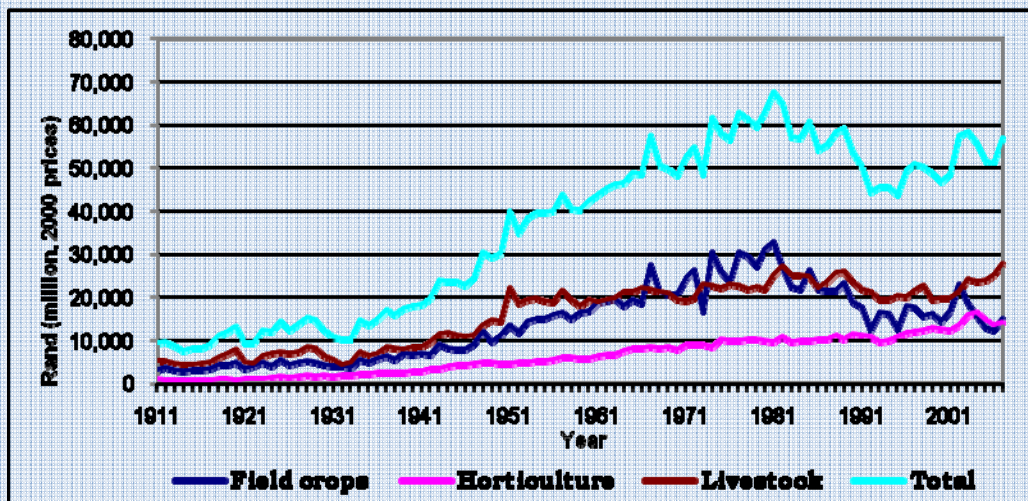


Panel c: Industry Shares

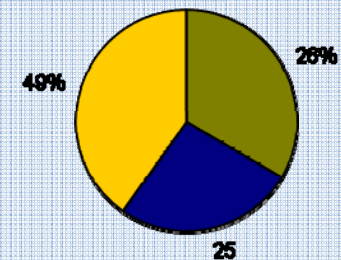
1911



Panel b: Gross Value of Agricultural Production by Sector, 1910-2004

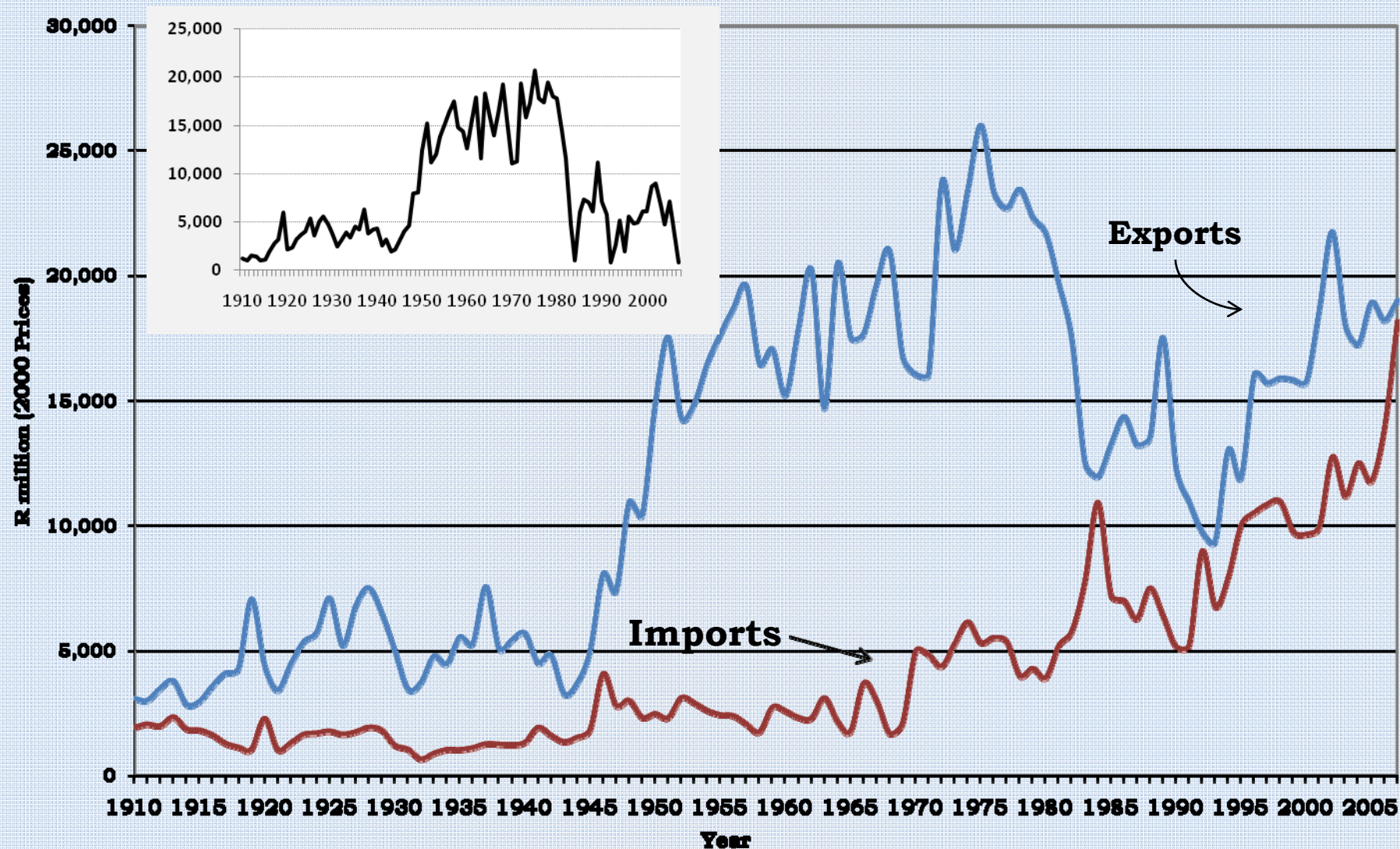


2007



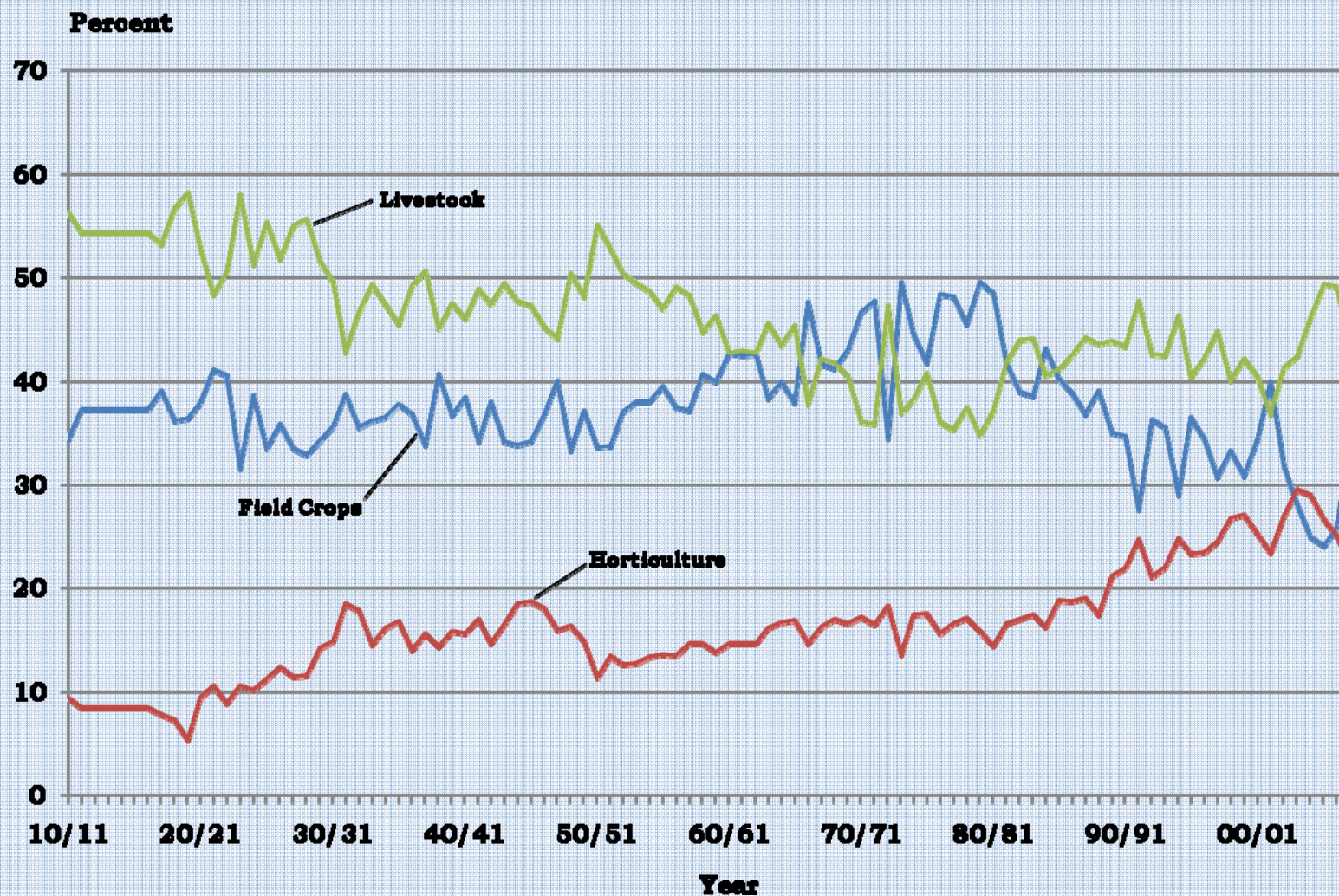
Source: Liebenberg, Pardey & Kahn 2010

Agricultural Trade: 1910-2007



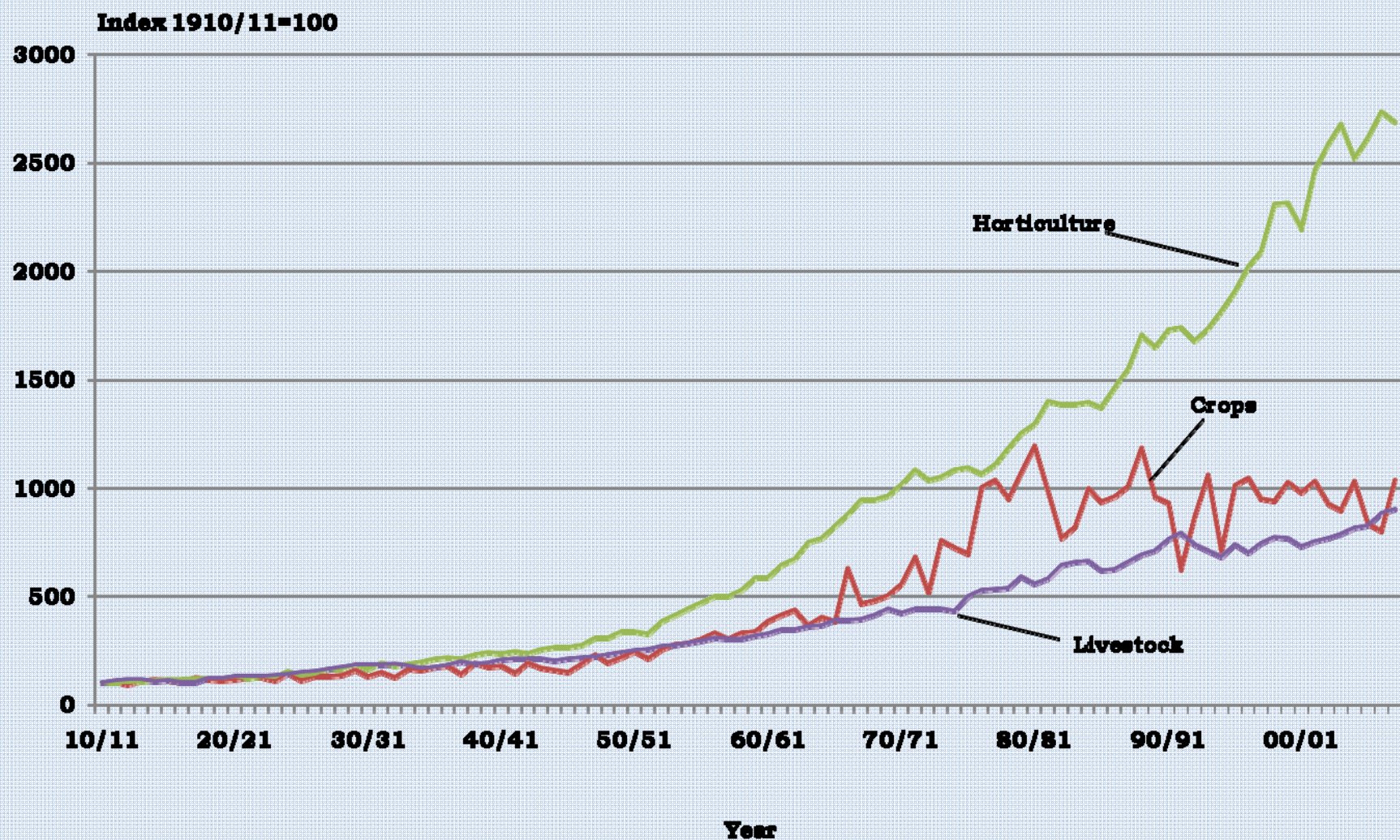
Source: Liebenberg, Pardey & Kahn 2010

Industry Shares of Output, 1911-2008



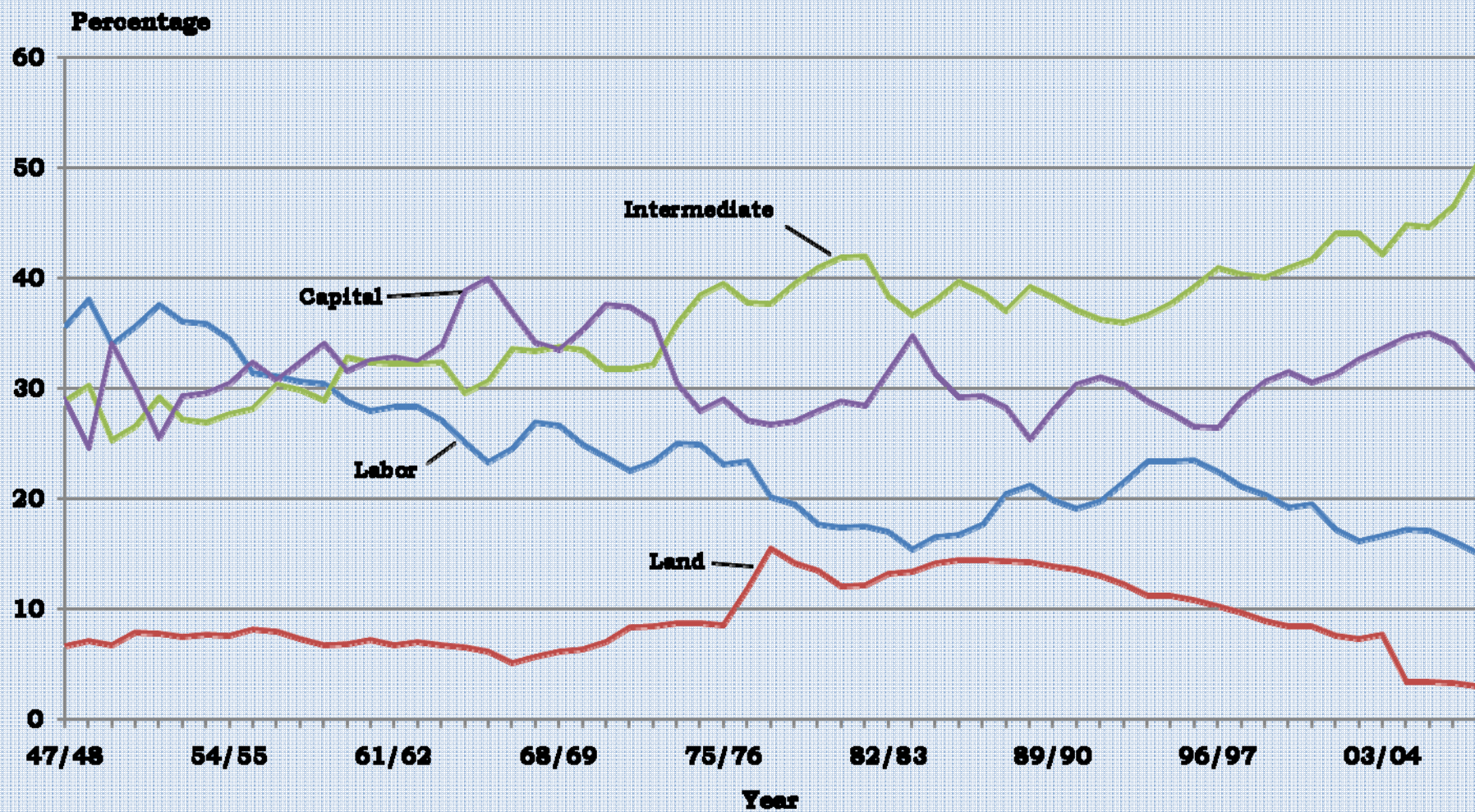
Source: Liebenberg & Pardey 2010

Indices of Output Quantity, 1911-2008



Source: Liebenberg & Pardey 2010

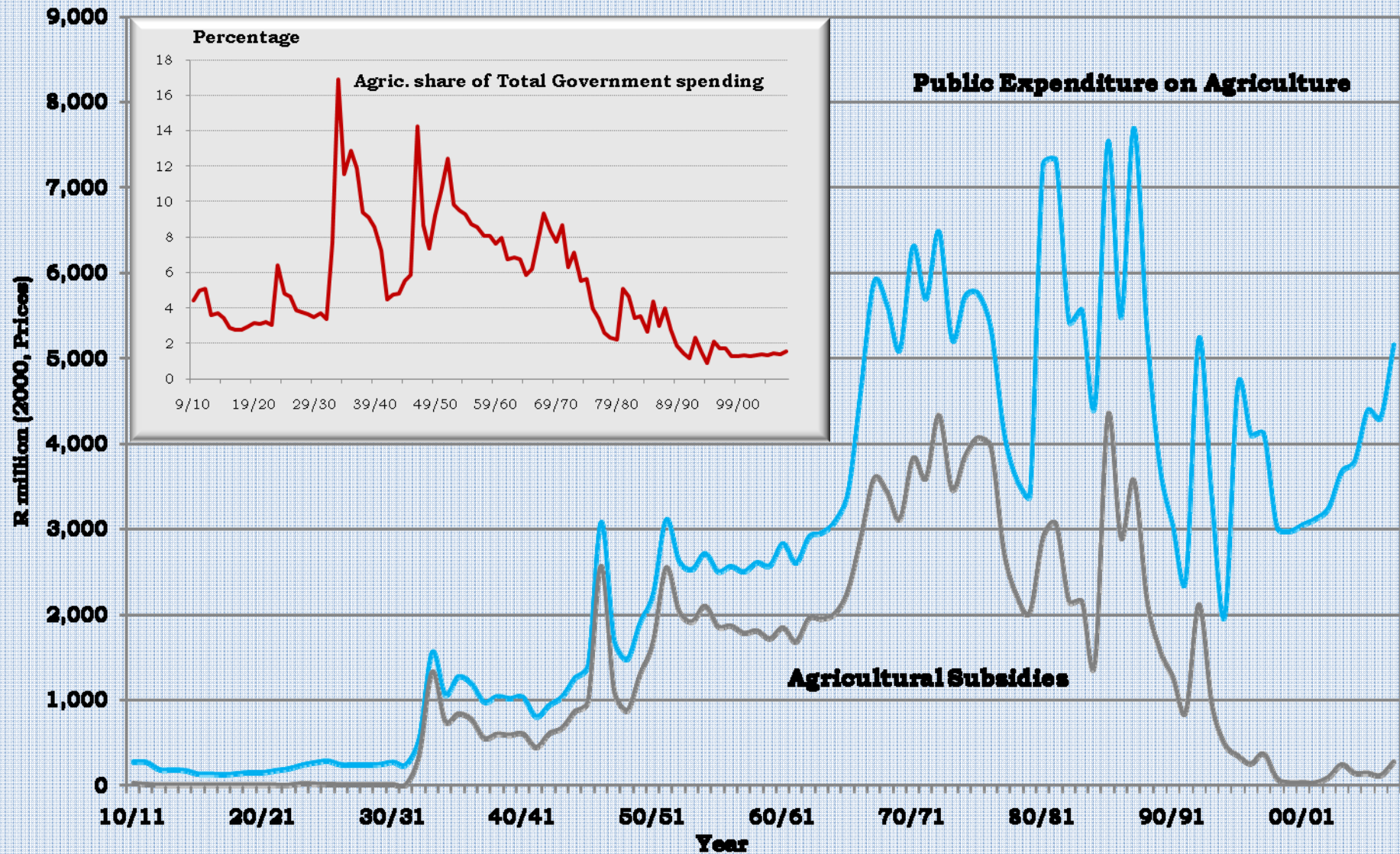
Input Cost Shares, 1947-2008



Source: Liebenberg & Pardey 2010

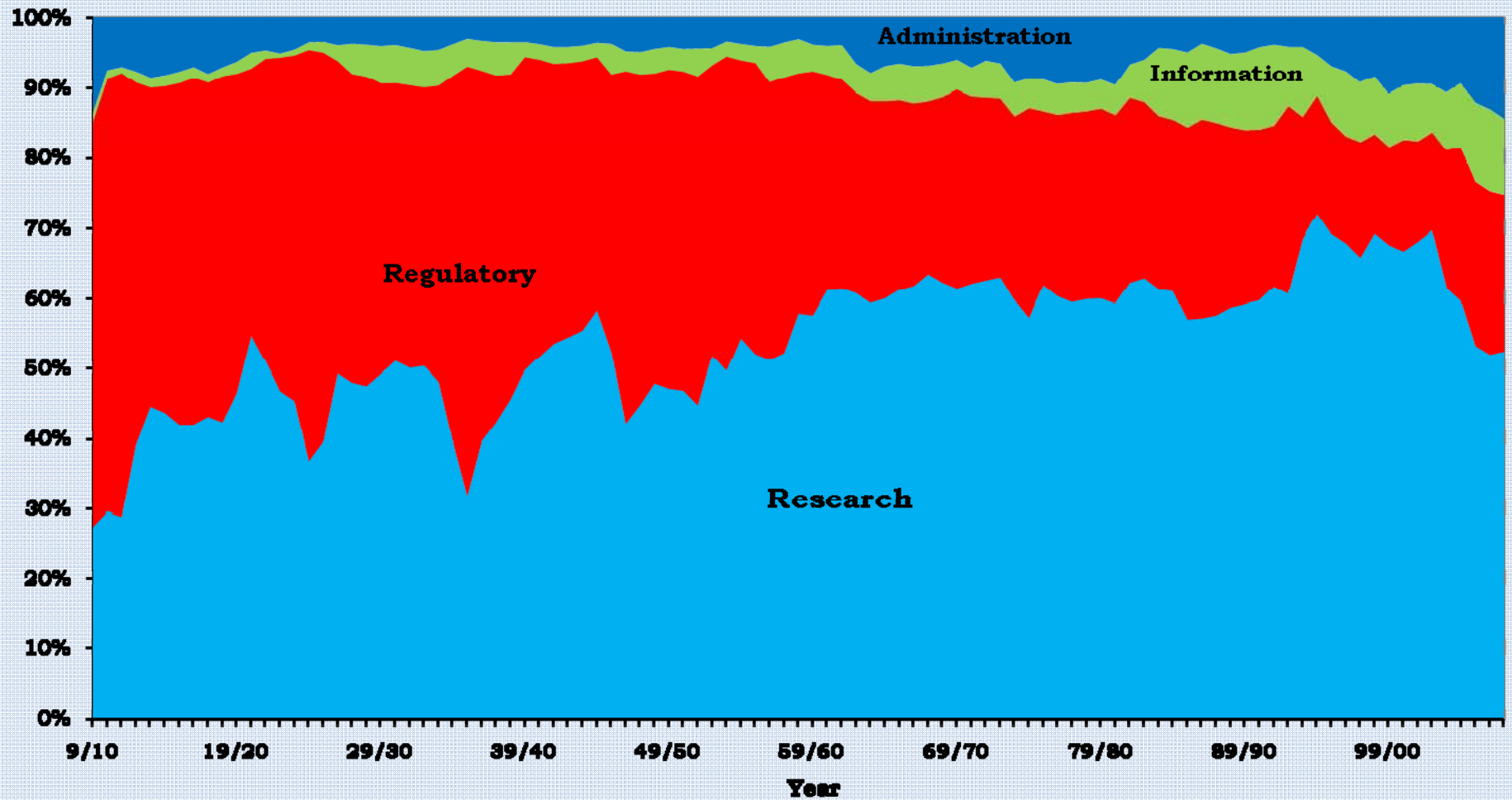
**Public Sector Investment in/
Expenditure on Agriculture,
1911-2008**

Public Spending on RSA Agriculture, 1910 - 2007

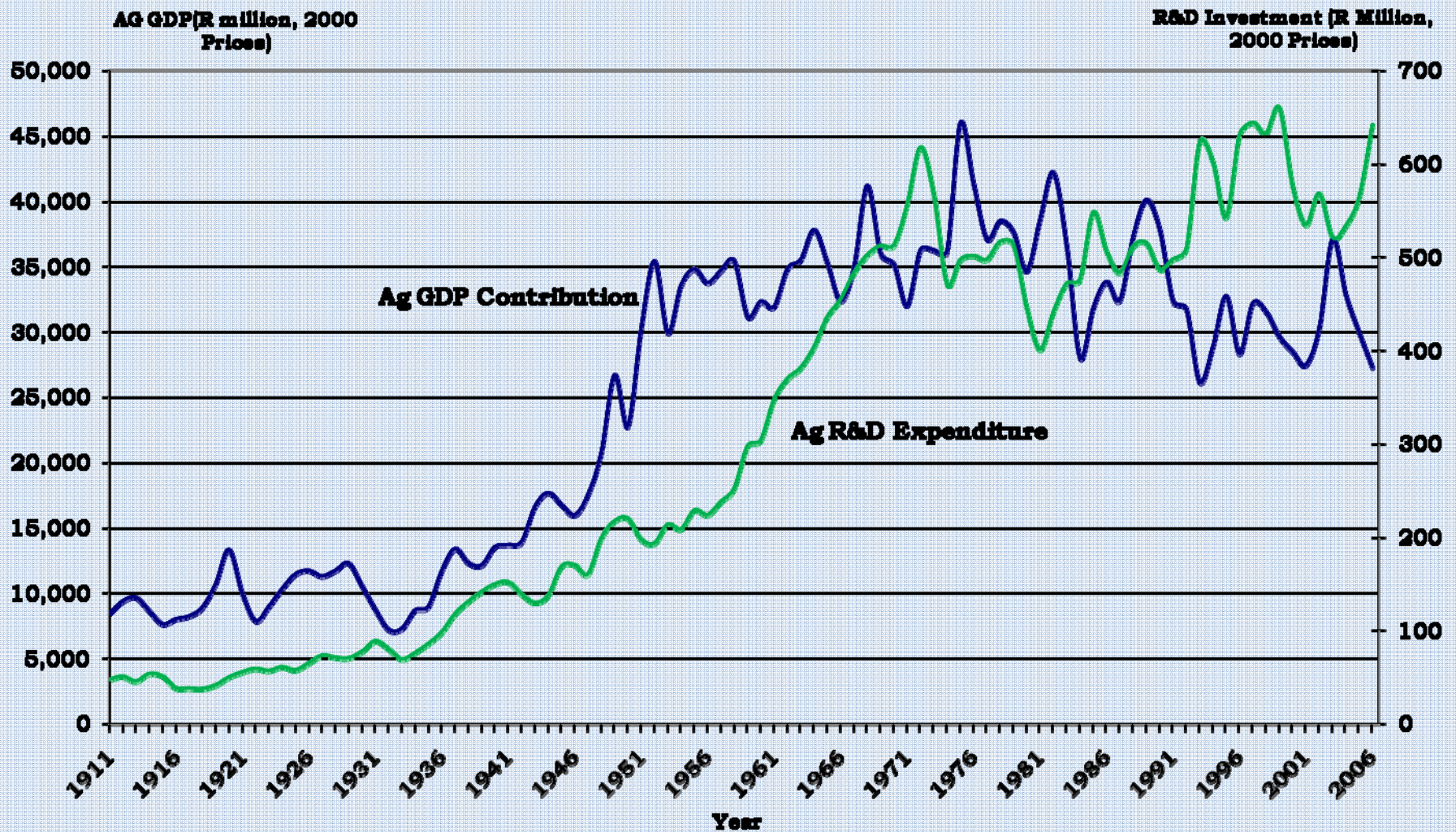


Source: Liebenberg 2010

Spending by Service Category



Agricultural GDP & R&D Expenditure, 1910-2008



Source: Liebenberg, Pardey & Kahn 2010

Institutional Evolution

1910

Amalgamation of 18 Agricultural divisions of former Colonies and Republics

1954

**Major revamp of R&D and extension structures
Introduction of Regional Focus**

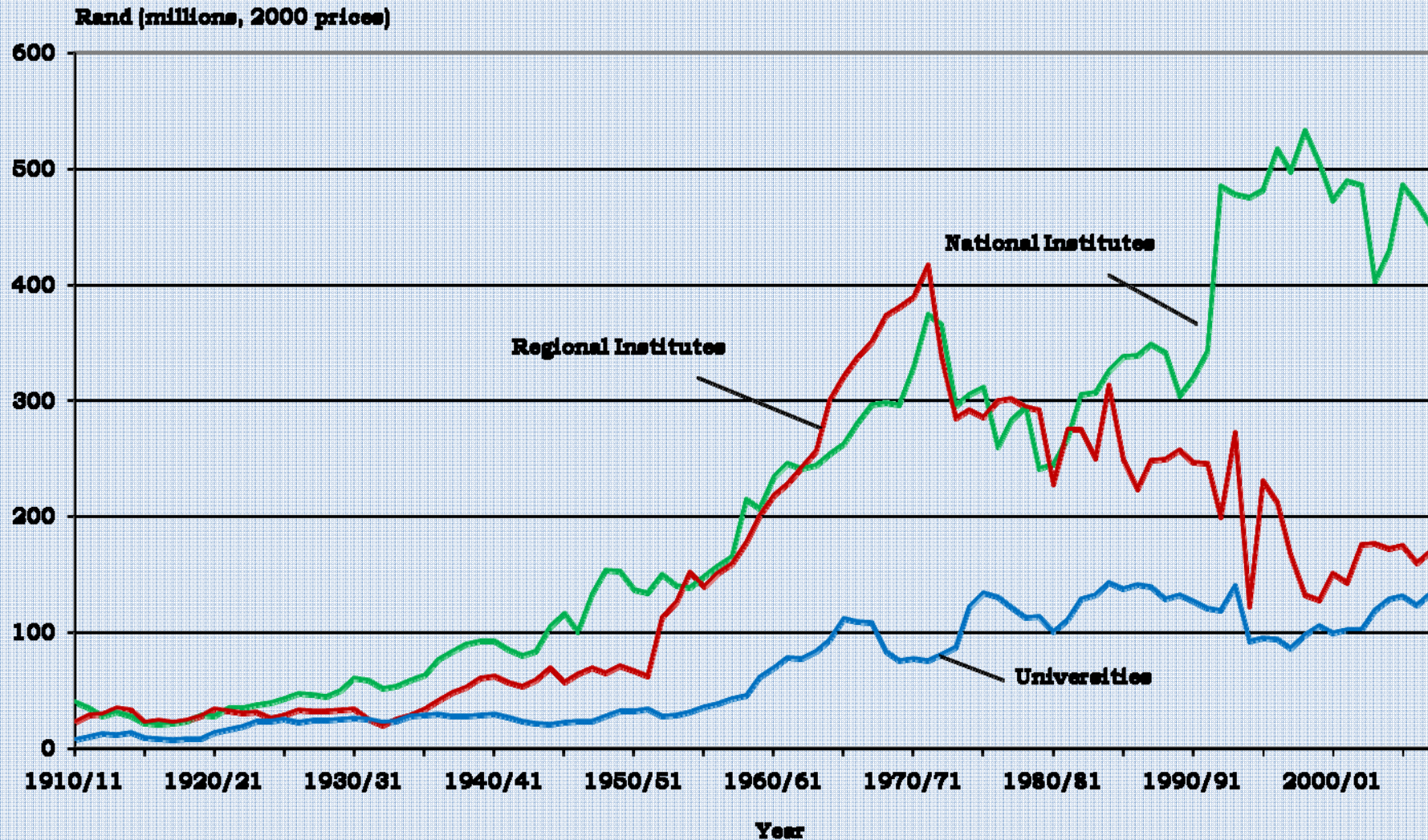
1971

**Rationalization & split with University Faculties
National Commodity Institutes separate from Regional
Institutes & greater autonomy**

1992 to date

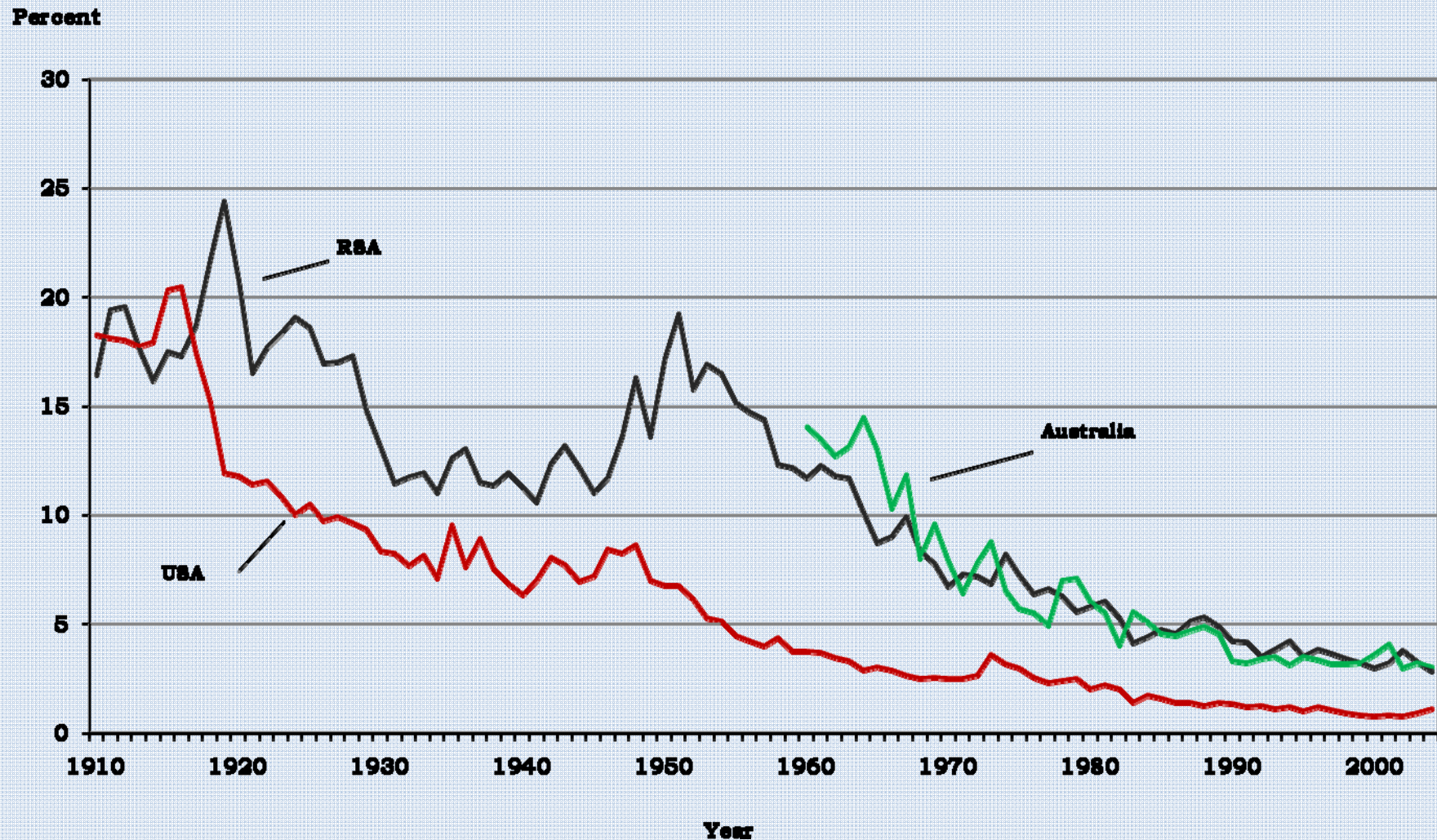
**National Institutes taken up in National Science System
Move to new political dispensation & Science Research
Policy**

Institutional spread of Ag R&D Spending, 1911-2007



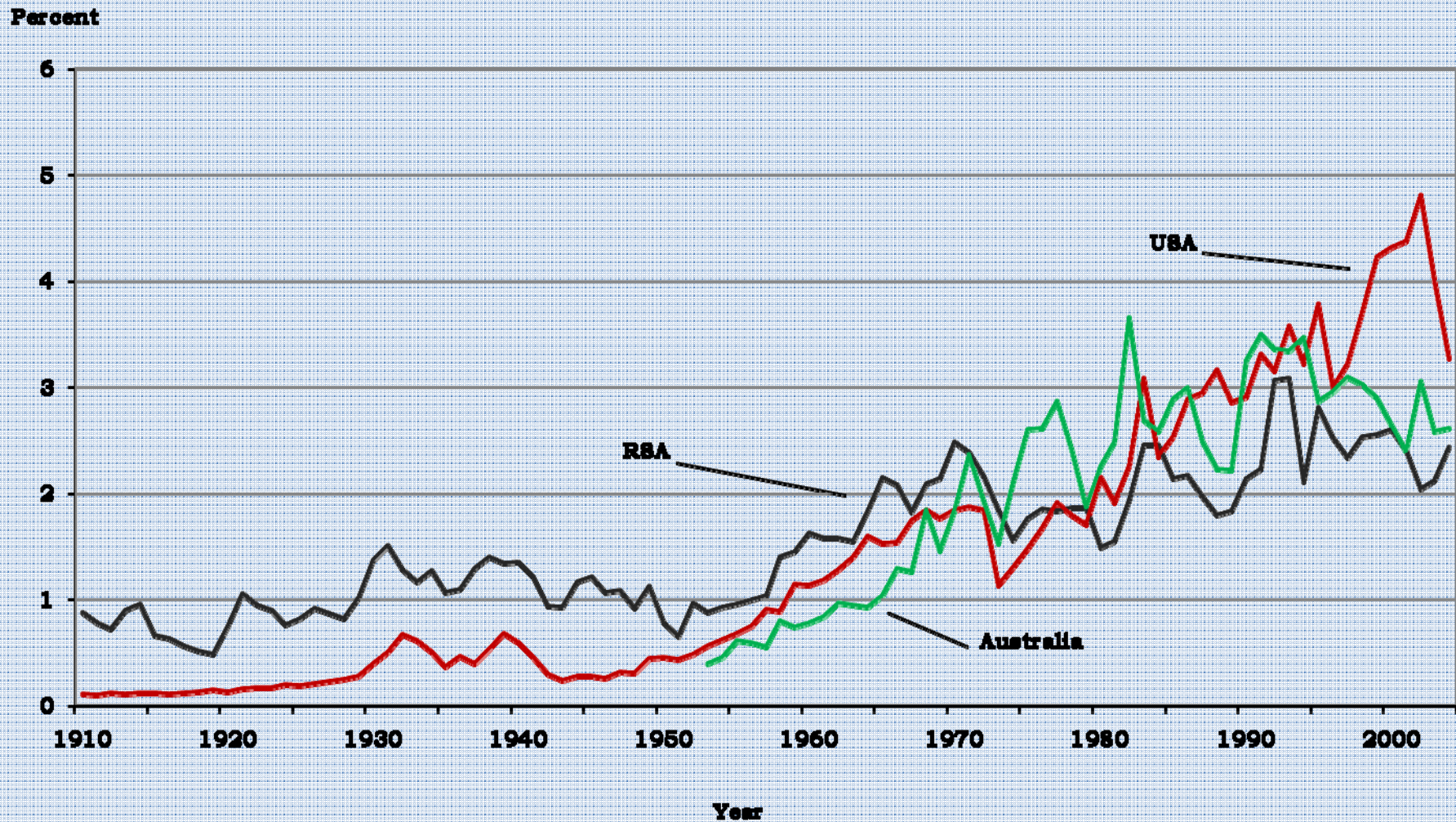
Source: Liebenberg, Pardey & Kahn 2010

South Africa vs United States vs Australia: Agriculture as a share of GDP



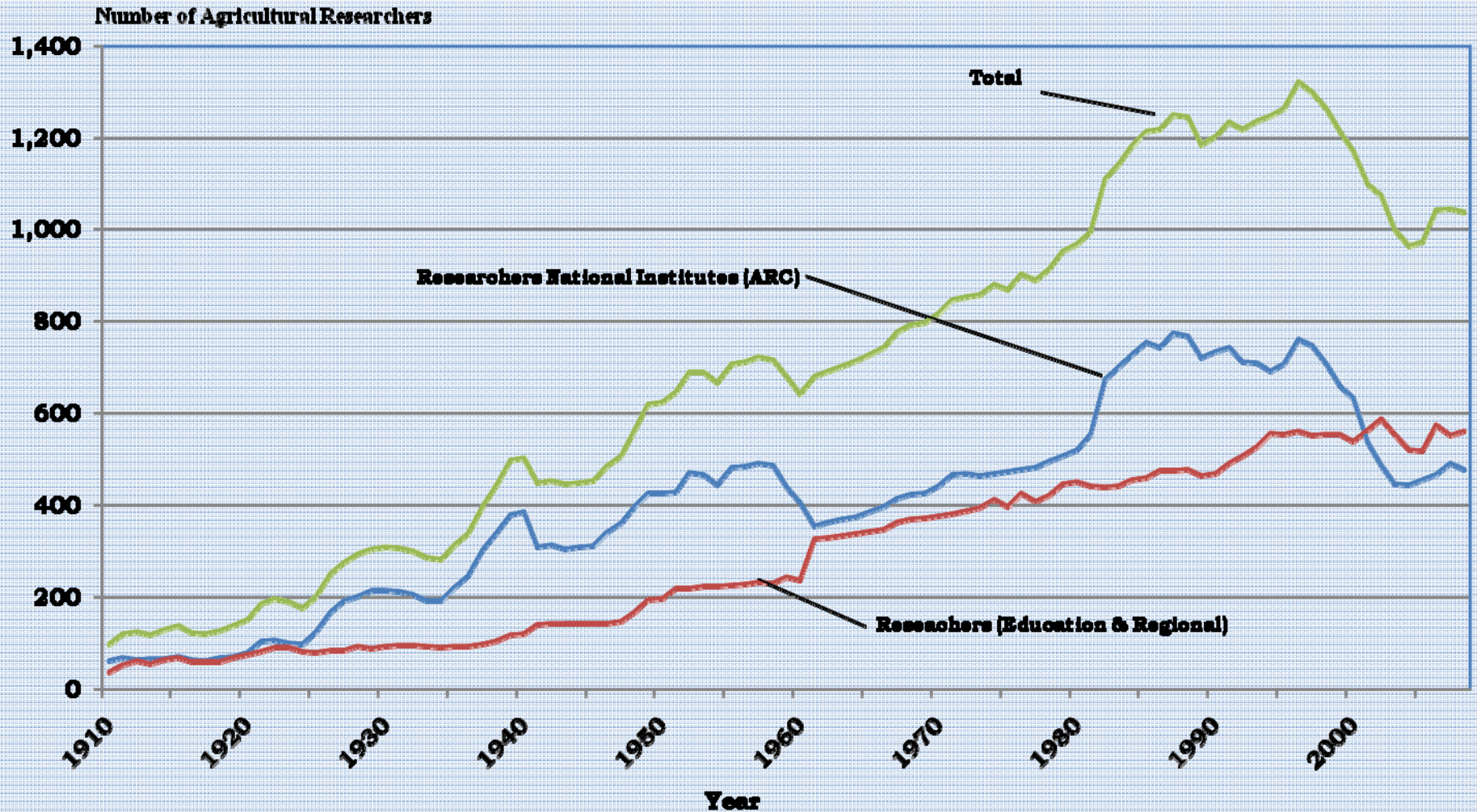
Source: Liebenberg, Pardey & Kahn 2010

South Africa vs United States vs Australia: Research Intensity



Source: Liebenberg, Pardey & Kahn 2010

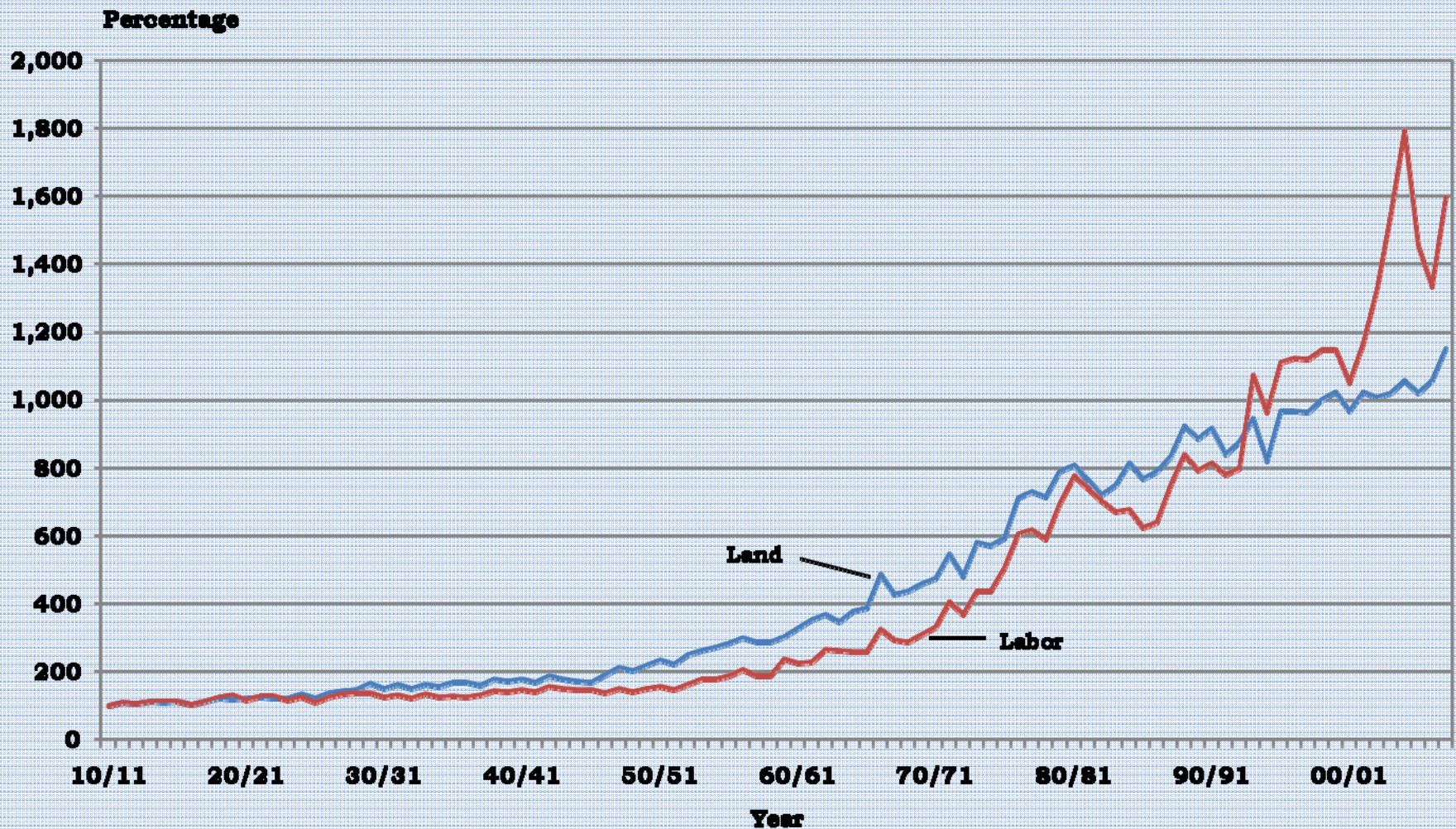
Scientist Trends, 1911-2008



Source: Liebenberg, Pardey & Kahn 2010

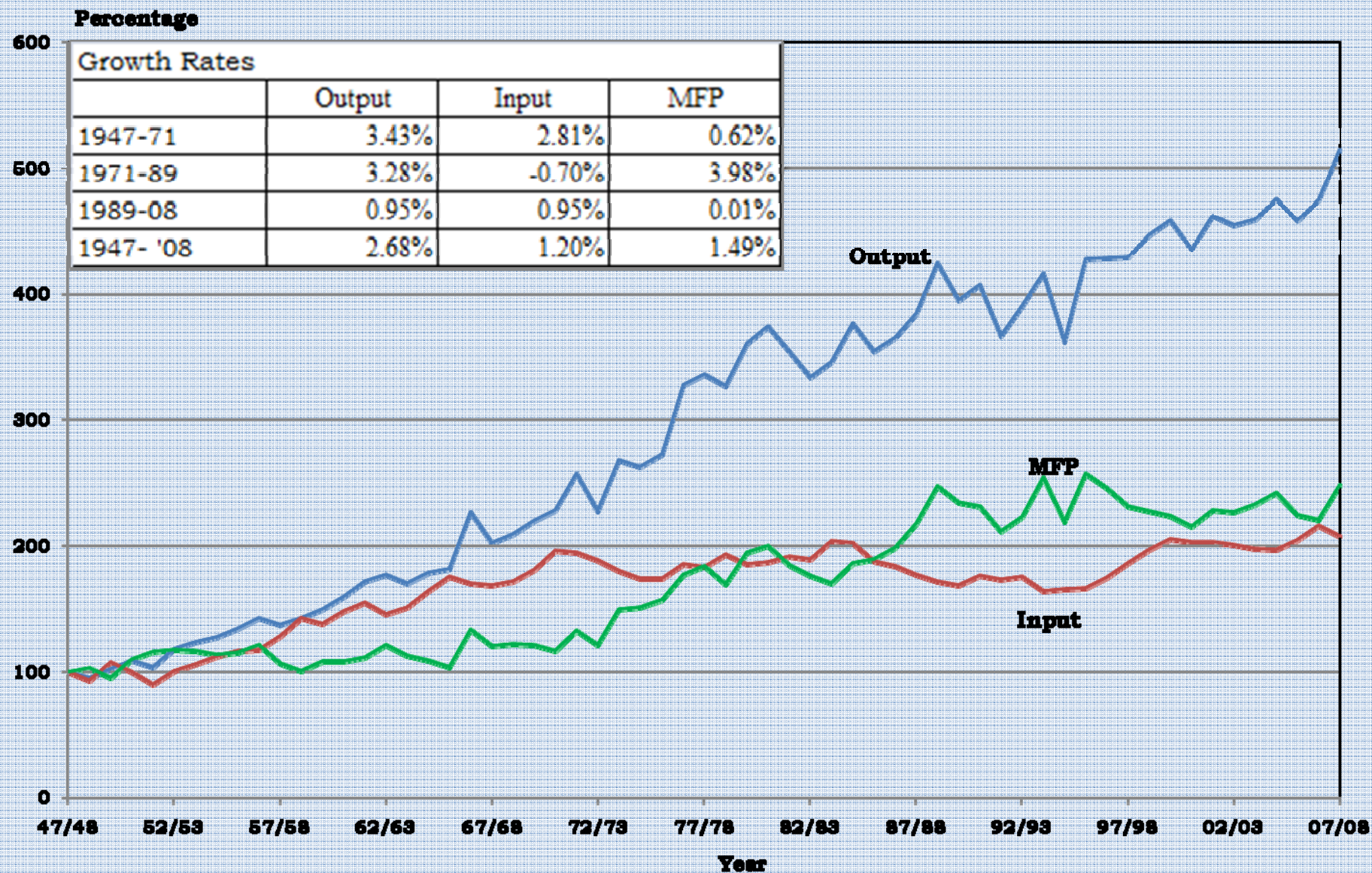
Productivity Trends

Land-Labor Productivity, 1911-2008



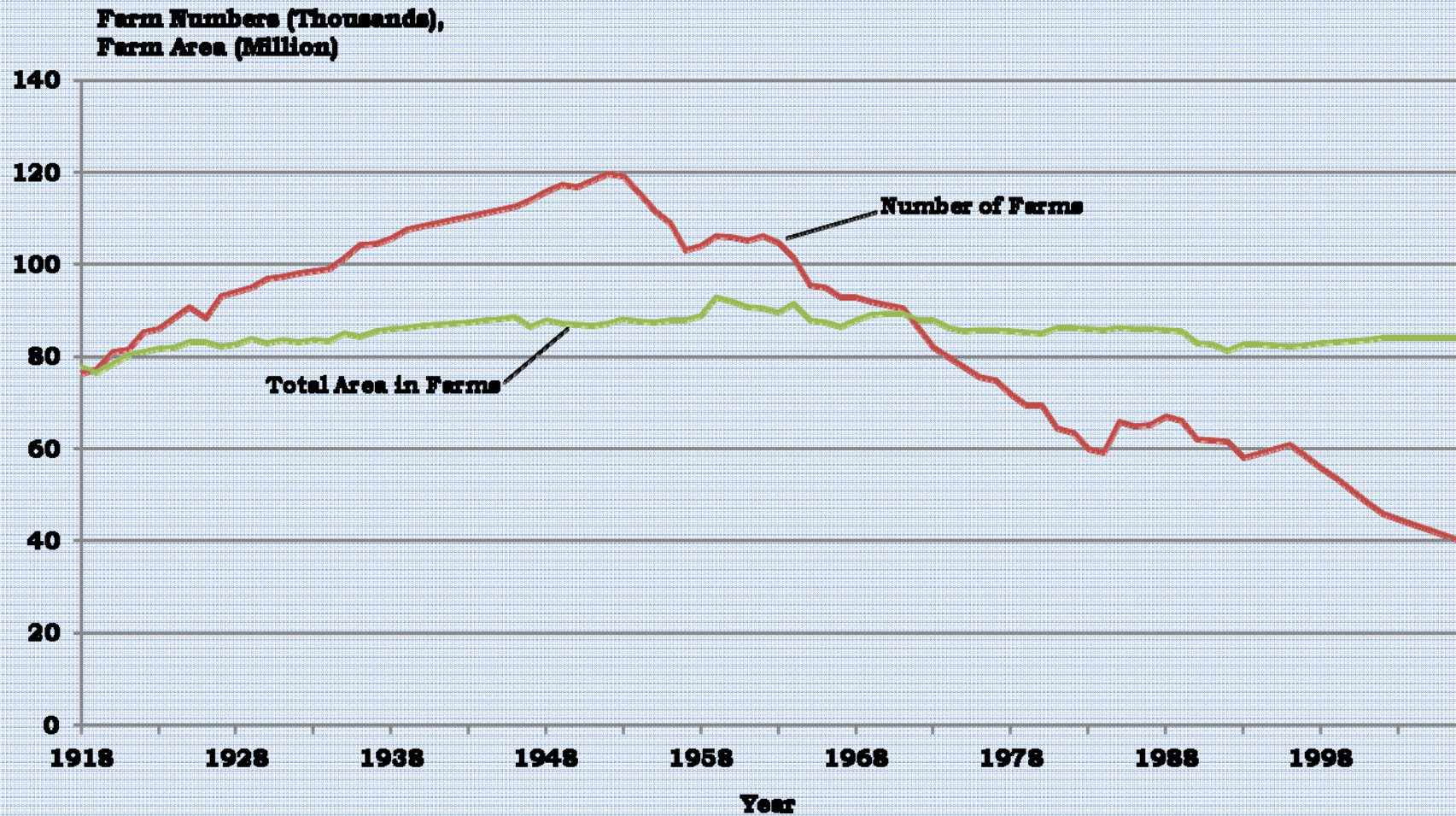
Source: Liebenberg & Pardey 2010

South African Agriculture, Output, Input & MFP Indexes -1947 to 2008



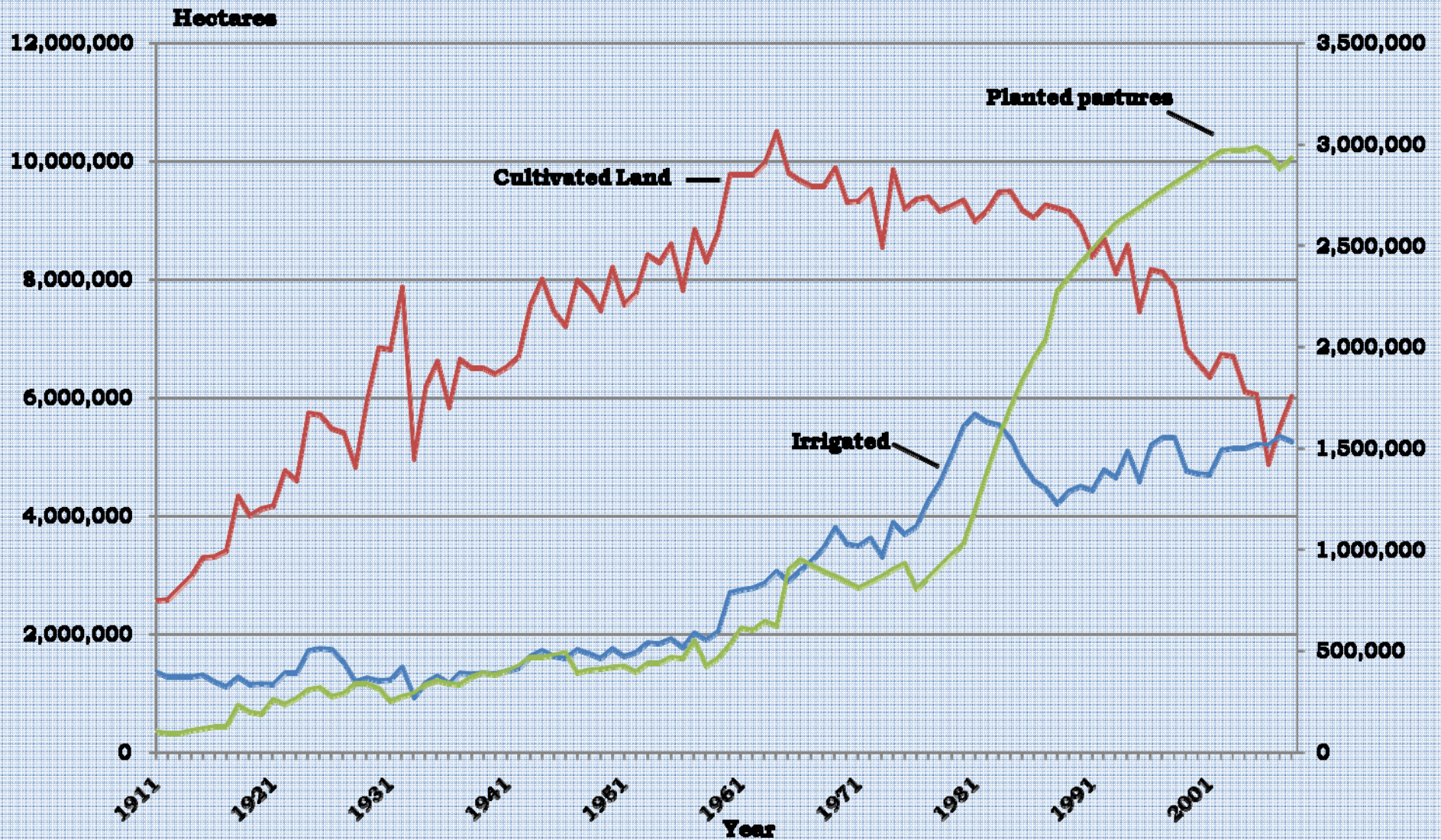
Source: Liebenberg & Pardey 2010

Area in Farms, 1918 - 2008



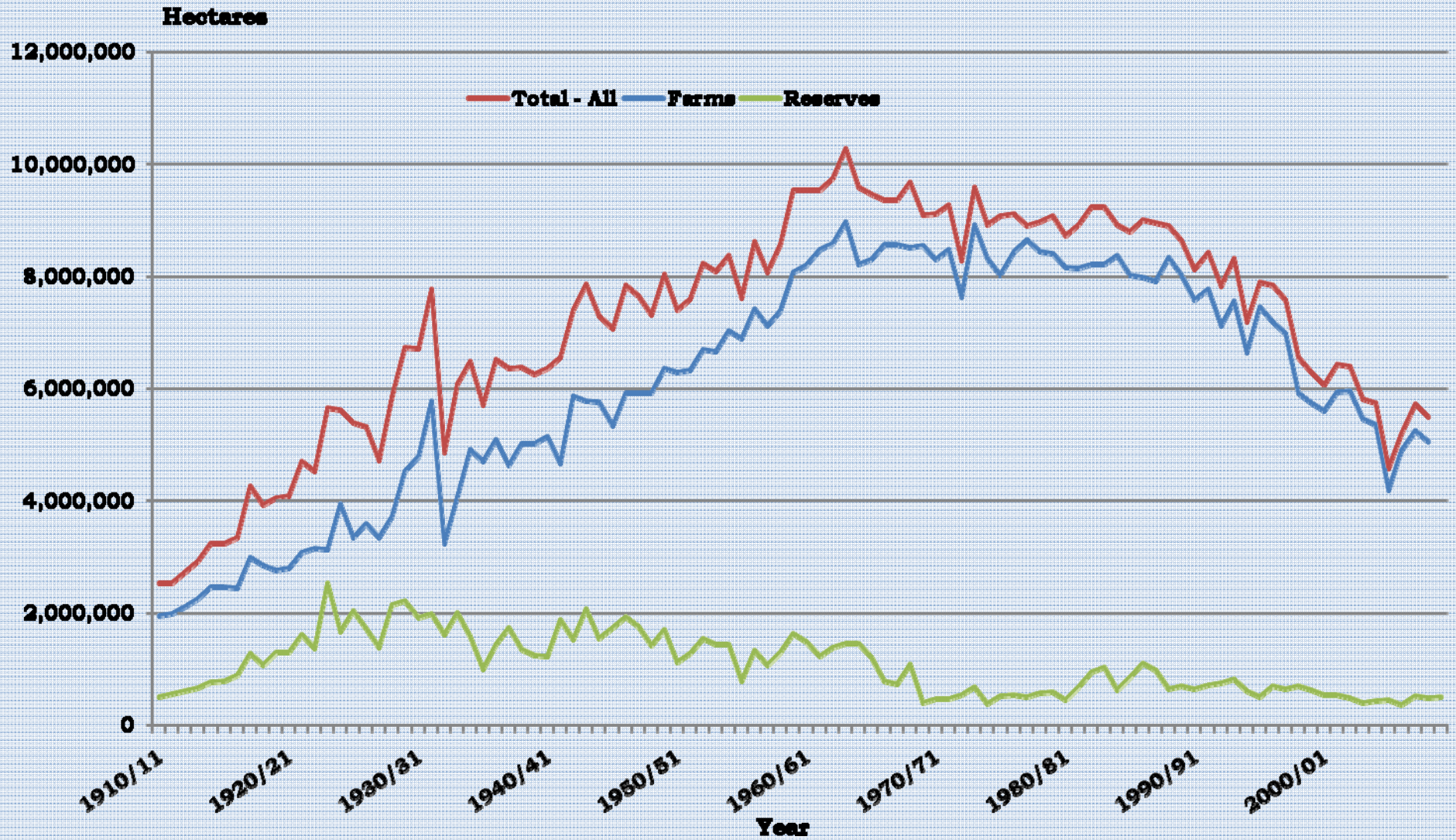
Source: Liebenberg 2010

Areas Cultivated, Irrigated and Pastures, 1911-2008



Source: Liebenberg 2010

Racial Disaggregation on Crop Land, 1911-2009



Source: Liebenberg 2010